

SW RGBHV Series

TWO, FOUR, AND SIX INPUT ANALOG
RGBHV & STEREO AUDIO SWITCHERS

- Two, four, and six input analog RGBHV models with and without stereo audio
- 350 MHz (-3dB) RGB video bandwidth
- Input autoswitching capabilities
- Video Inputs and outputs on BNC connectors
- Input audio gain and attenuation
- 9-pin contact closure remote control
- RS-232 control
- Rugged metal enclosure
- Rack-mountable
- Internal international power supply



The Extron SW RGBHV Series analog RGBHV and stereo audio switchers are available in a variety of input configurations, as well as with or without audio. The SW RGBHV Series allows multiple high-resolution RGB video signals to be switched to one compatible display.



Extron® Electronics

www.extron.com

DESCRIPTION

The Extron SW RGBHV Series are active analog RGBHV switchers using BNC connectors. There are six switchers in the series. The **SW2 RGBHV**, **SW4 RGBHV**, and **SW6 RGBHV** are two, four, and six input, one output RGBHV video switchers, respectively. The **SW2 RGBHV A**, **SW4 RGBHV A** and **SW6 RGBHV A** are also two, four, and six input, one output RGBHV switchers, but also include several audio features. All models allow multiple RGBHV, RGBS, RGsB, RsGsBs, and RGB source inputs with composite video/sync (Europe SCART connections). With 350 MHz (-3dB) of RGB video bandwidth the SW RGBHV Series switchers can support a wide array of high-resolution signals.

The audio models of the SW RGBHV Series include captive screw audio connectors for balanced and unbalanced stereo audio sources. Each model with audio includes adjustable input gain and attenuation, allowing users to set the individual input audio levels, so that there is no significant difference in volume when switching between sources. All of the switchers can be controlled via front panel buttons or through a 9-pin contact closure remote control port. The 9-pin female D connector enables RS-232 control, as well as contact closure which allow the use of the Extron KP 6 Keypad Remote Control and the Extron IR 102 universal remote kit.



IR 102 Universal Remote Kit

Each switcher is user-configurable for manual or autoswitching modes. The autoswitch function can be enabled or disabled via a toggle switch on the back panel. Autoswitching allows any input of the switcher to be selected automatically when the switcher detects a sync signal. For example, a number of wall plate receptacles can be installed around a room, each routed to a different input of a switcher. As soon as an active RGB source is connected to the wall plate, the switcher automatically selects that input.

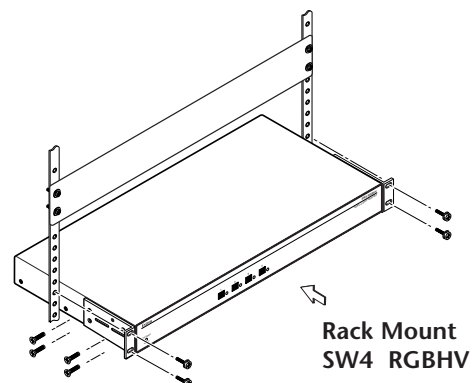
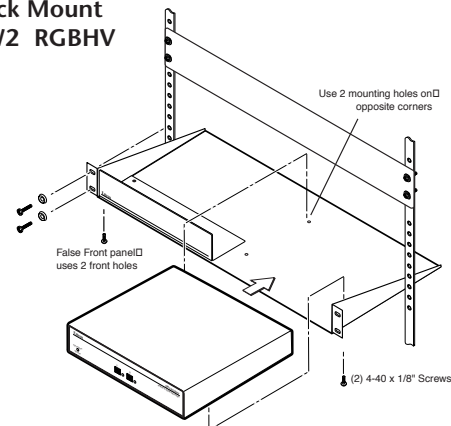


KP 6 Keypad Remote control

FEATURES

- **Inputs** – Two, four, and six input models are available with BNC connectors throughout.
- **Outputs** – All SW RGBHV Series switchers feature one output on female BNC connectors.
- **Autoswitching** – Allows any input to be selected automatically when the switcher detects a source, making it ideal for automatic routing and unattended operation.
- **Balanced and unbalanced stereo audio** – Accepts both balanced and unbalanced audio signals on 3.5 mm captive screw connectors.
- **Input audio gain and attenuation** – The SW RGBHV/A Series allows users to set the level of audio gain or attenuation (-18dB to +24dB). Individual input audio levels may be adjusted so there is no noticeable volume difference between sources.
- **RS-232 control** – A rear panel, RS-232 port enables control via a third party control system. Extron's Simple Instruction Set (SIS™) allows for quick and easy programming.
- **KP 6 Keypad Remote Control** – The optional KP 6 switches the inputs on the SW RGBHV Series (four and six input models only). It comes with a 25-foot (8 meters) cable to connect the switcher's 9-pin remote control port to the KP 6.
- **IR control** – With the optional IR 102 kit, the SW RGBHV switchers can be easily controlled with an IR 102 handheld remote.
- **Rack-mountable** – Two input models are housed in a half rack, 1U high enclosure that will fit in an Extron 1U 19-inch Rack Shelf Kit; four and six input models are 1U, full rack width enclosures that can be mounted into a rack without any additional hardware.
- **Internal international power supply** – The 100-240VAC, 50/60Hz, autoswitchable, internal power supply provides worldwide power compatibility.

Rack Mount
SW2 RGBHV



VIDEO

Gain.....	Unity
Bandwidth	350 MHz (-3dB), fully loaded
Differential phase error	1.0%, 0 to 350 MHz
Differential gain error.....	1.0%, 0 to 350 MHz
Crosstalk	-70dB @ 10 MHz
Switching speed	5 ms (max.)

VIDEO INPUT

Number/signal type	
SW2/4/6	2, 4, 6 RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video
Connectors	
SW2 RGBHV/RGBHV A.....	2 x 5 BNC female
SW4 RGBHV/RGBHV A.....	4 x 5 BNC female
SW6 RGBHV/RGBHV A.....	6 x 5 BNC female
Minimum/maximum levels	Analog-0.3V to 1.5V p-p with no offset
Impedance.....	75 ohms
Return loss	-30dB @ 10 MHz
Maximum DC offset	5.0V

VIDEO OUTPUT

Number/signal type	
All models	1 RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video (or digital audio)
Connectors	
All models.....	5 BNC female
Impedance.....	75 ohms

SYNC

Input type	RGBHV (except SW6 YUV A), RGBS, RGsB, RsGsBs
Output type.....	RGBHV (except SW6 YUV A), RGBS, RGsB, RsGsBs
Input level	Analog or TTL, 0.5V to 5.0V p-p
Output level.....	5.0V p-p (if not terminated)
Input impedance	510 ohms
Output impedance	75 ohms
Max. input voltage	5.0V p-p
Max. propagation delay.....	35 ns
Max. rise/fall time	4 ns
Polarity	Positive or negative (follows input)

AUDIO — SW 2/4/6 RGBHV A ONLY

Gain.....	Adjustable when audio gain is set to unity (0dB), balanced output will have a 0dB gain; unbalanced output will be attenuated by 6dB.
Frequency response	20 Hz to 20 kHz, ± 0.05 dB
THD + Noise	0.03% @ 1 kHz, 0.3% @ 20 kHz at rated maximum output drive
S/N	>90dB at rated maximum output drive
Crosstalk	<-65dB @ 20 kHz, <-80dB @ 1 kHz or below 60 Hz
Stereo channel separation	>80dB @ 20 Hz to 20 kHz
CMRR	>75dB @ 20 Hz to 20 kHz

AUDIO INPUT — SW 2/4/6 RGBHV A ONLY

Number/signal type.....	2, 4, or 6 stereo, balanced/unbalanced
Connectors	2, 4, or 6 3.5 mm captive screw connectors, 5 pole
Impedance.....	>10 kohms unbalanced, 20 kohms balanced, DC coupled
Nominal level (configurable)	-20dBV (100mV), -10dBV (316mV), 0dBu (0.775V), or +4dBu (1.23V)
Maximum level	+20dBu, (balanced or unbalanced) at stated %THD+N
Input gain adjustment	-18dB to +24dB, adjustable per input

AUDIO OUTPUT — SW 2/4/6 RGBHV A ONLY

Number/signal type.....	1 stereo, balanced/unbalanced
Connectors	1 3.5 mm captive screw connector, 5 pole
Impedance.....	50 ohms unbalanced, 50 ohms balanced
Nominal level.....	-20dBV (100mV), -10dBV (316mV), 0dBu (0.775V), or +4dBu (1.23V), configurable
Maximum level (Hi-Z)	>+20dBu, balanced or unbalanced at stated %THD+N
Maximum level (600 ohm)	>+15dBm, balanced or unbalanced at stated %THD+N

NOTE: 0dBu = 0.775 volts (RMS). 0dBV = 1.0V.

CONTROL/REMOTE — SWITCHER

Serial control port	RS-232, 9-pin female D connector (same as the contact closure port)
Baud rate and protocol	9600, 8-bit, 1 stop bit, no parity
Serial control	
pin configurations	2 = TX, 3 = RX, 5 = GND
Contact closure	9-pin female D connector (same as the RS-232 port)
Contact closure	
pin configurations	1 = input #1, 4 = input #2, 6 = input #3, 7 = input #4, 8 = input #5, 9 = input #6
Program control.....	Extron's control program for Windows® Extron's Simple Instruction Set™ – SIS™

GENERAL

Power	100VAC to 240VAC, 50/60 Hz, 20 watts, internal, autoswitchable
Rack mount	
SW2 RGBHV, SW2 RGBHV A	Yes, with optional rack shelf, part #60-190-01
All other models	Yes, with included bracket kit, part #70-077-03
Enclosure type	Metal
Enclosure dimensions	
SW2 RGBHV, SW2 RGBHV A	1.75" H x 8.75" W x 9.5" D (1U high, half rack width) 4.4 cm H x 22.2 cm W x 24.1 cm D (Depth excludes connectors.)
All other models	1.75" H x 17.5" W x 8.5" D (1U high, full rack width) 4.4 cm H x 44.5 cm W x 21.6 cm D (Depth excludes connectors.)
Product weight	
SW2 RGBHV, SW2 RGBHV A ..	4.0 lbs (1.8 kg)
All other models	7.0 lbs (3.2 kg)
Shipping weight	
SW2 RGBHV, SW2 RGBHV A ..	8 lbs (3.6 kg)
All other models	12 lbs (5.4 kg)
Listings	UL, CUL
Compliances	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF	30,000 hours
Warranty	3 years parts and labor

Model Part Number

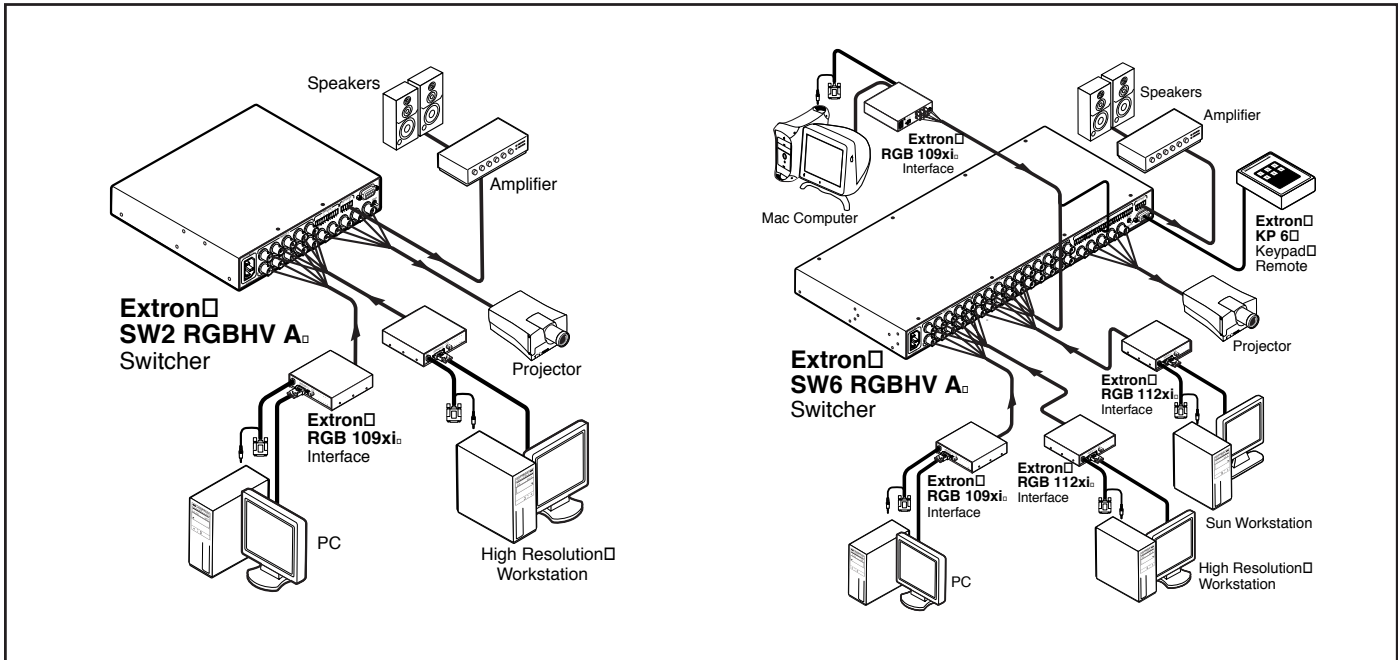
RGBHV Only Models

SW2 RGBHV	60-491-01
SW4 RGBHV	60-492-01
SW6 RGBHV	60-493-01

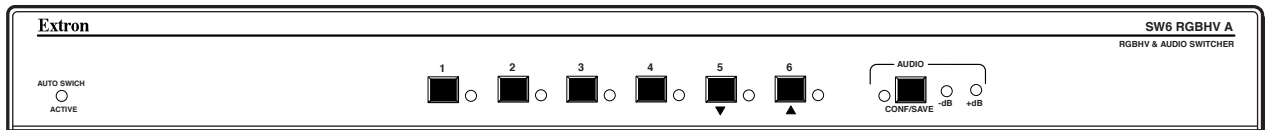
RGBHV & Audio Models

SW2 RGBHV A	60-491-21
SW4 RGBHV A	60-492-21
SW6 RGBHV A	60-493-21
IR 102 Kit.....	70-224-01
KP 6 Keypad Remote control	60-111-20

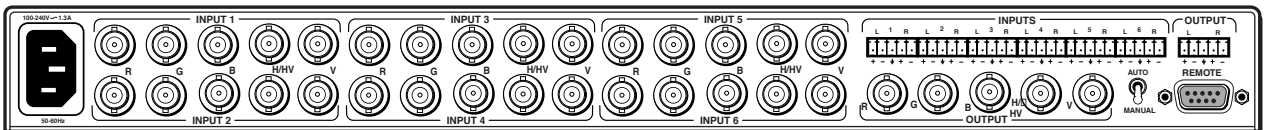
APPLICATION DIAGRAMS



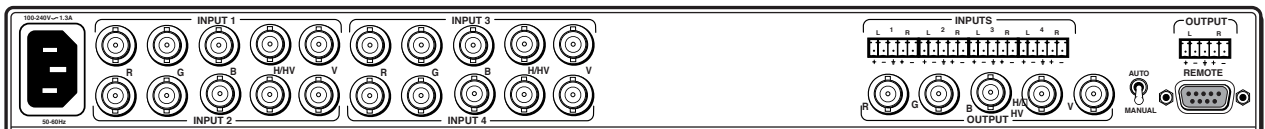
PANEL DRAWINGS



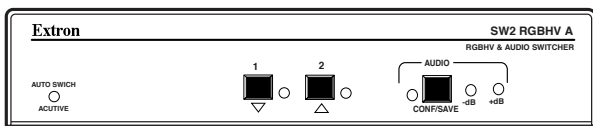
SW6 RGBHV A (Front)



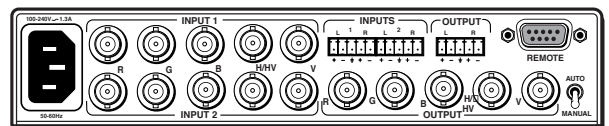
SW6 RGBHV A (Back)



SW4 RGBHV A (Back)



SW2 RGBHV A (Front)



SW2 RGBHV A (Back)



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